

KOVALEV, D.S., kand.med.nauk

Study of intraocular pressure in patients with chemical burns
of the eyes. Zdrav.Bel. 8 no.12:47-49 D '62. (MIRA 16:1)

1. Kafedra glaznykh bolezney (zav. - prof. M.Z.Popov) Smolen-
skogo meditsinskogo instituta.
(INTRACULAR PRESSURE) (EYE—WOUNDS AND INJURIES)

KOVALEV, D.S., kand. med. nauk

Hyaluronidase activity of the iris tissue and the ciliary body of the eye in glaucoma, cataract and traumas. Trudy SMI 16:253-258 '69.

1. Iz kafedry glaznykh bolezney (zav. - prof. M.Z. Popov) Smolenskogo gosudarstvennogo meditsinskogo instituta. (MIRA 18:1)

KOVALEV, D.T.

Short-delay blasting in sinking an inclined shaft. Shakht.stroi, 5
№ 4:24-25 Ap '61.
(MIRA 14:5)

1. Chelyabinskij nauchno-issledovatel'skiy institut gornogo dela.
(Shaft sinking) (Blasting)

BAL'KIN, M.K.; KOVALEV, D.T.

Use of the short-delay blasting method for driving inclines.
Ugol' 37 no.11:18-20 N '62. (MIRA 15:10)

1. Chelyabinskii nauchno-issledovatel'skiy institut gornogo dela.
(Chelyabinsk Basin--Coal mines and mining) (Blasting)

REZNIK, I.D.; KOVALEV, D.Ya.; KUDRIN, A.N.; TUMASOV, V.F.; GRITSKOVA, V.T.;
KRUGLYAKOVA, M.S.

Depletion of waste slags from shaft furnace smelting of oxidized
nickel ores in electric crucibles. TSvet. met. 36 no.9:22-28
S '63.

(MIRA 16:10)

REZNIK, I.D., kand. tekhn. nauk; LYUMKIS, S.Ye.; KOVALEV, D.Ya.; TUMASOV,
V.P.; KRUGLYAKOVA, M.S.; GRITSKOVA, V.T.

Periodic process of depleting waste slags from the shaft-
furnace smelting of oxidized nickel ores with the help of
an electric hearth. Sbor. nauch. trud. Gintsvetmeta
no.23:151-163 '65.

(MIRA 18:12)

KOVALEV, F.I., [deceased]; TSYGANKO, N.I.; PAVLUTSKAYA, Ye.I., redaktor;
GUROVA, O.A., tekhnicheskiy redaktor

[Instructions for applying the classification of reserves to
copper deposits] Instruktsiya po primeneniiu klassifikatsii zapasov
k mestorozhdeniyam medi. Moskva, Gos.ruuchno-tekhn.izd-vo lit-ry
po geol. i okhrane nedor, 1954, 25 p. (MLRA 10:10)

1. Russia (1923- U.S.S.R.) Gosudarstvennaya komissiya po
zapasam poleznykh iskopayemykh.
(Copper ores)

VERESHCHETIN, V., kand.yuridicheskikh nauk; KOVALEV, F., kand.
yuridicheskikh nauk

Again a falsification. Av.i kosm. 45 no.2:92-94 F '63.

(MIRA 16:2)

(Space flight)

AUTHOR:

Kovalev, F.I., Mostkova, G.P. (Moscow)

SOV/24-58-12-5/27

TITLE:

The Operation of Saturable Reactors in d.c. Transmission
Converters Subject to Control and Reversal (Rabota
nasyshchayushchikhsya reaktorov v preobrazovatel'nykh
ustanovkakh peredachi postoyannogo toka pri nalichii
regulirovaniya i reversa)

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh
Nauk, 1958, Nr 12, pp 32-37 (USSR)

ABSTRACT:

The saturable reactors are inserted in the anode circuits
of mercury rectifiers, which are shunted by capacitors,
as shown in the three-phase bridge circuit of Fig.1.
The physical causes of the waveforms for the anode
voltage u_a , phase current i , and reactor voltages u_1 to
 u_3 shown in Fig.2 (for inverter operation) are discussed.
Eq.1 gives the reactor voltage during the second
magnetization; v_{20} , the point where this second phase
begins, is given roughly by Eq.2 (where RC is in μ sec).
The induction at the end of this second magnetization is
given by Eq.3. Fig.3 describes the state of the core
during these three phases of magnetization; Eq.4 gives

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SOV/24-58-12-5/27

The Operation of Saturable Reactors in d.c. Transmission Converters
Subject to Control and Reversal

the voltage on the reactor during the third magnetization phase. Eq.5 defines the duration of this phase (Δv_3). Fig.4 gives the relation of the inverter extinction angle δ with the duration of the first phase. Fig.5 shows the dependence of δ' (the angle of extinction of apparatus working in two inverter regions with $\delta = 60^\circ$ and $\delta = 150^\circ$) and of δ on the reactor power P_i . Fig.6 relates δ' and δ to the design power of the reactor and also gives the $\Delta\beta$ required to keep δ constant. Eq.6 relates v_1 to the design power (approximately; see Fig.4). Eq.7 gives the point at which the magnetization changes sign and Eq.8 the time for which the reactor is not ready for a fresh rectification phase. Fig.5 shows the anode voltage and phase current with and without the reactors, and the flux in the cores, for two values of δ . It is concluded that brief operation as an inverter under fault conditions need not be hazardous, but that prolonged

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SOV/24-58-12-5/27

The Operation of Saturable Reactors in d.c. Transmission Converters
Subject to Control and Reversal

working at small extinction angles is inadvisable,
unless special measures (reactor shunts etc.) are taken.
There are 6 figures and 8 references of which 5 are
Soviet, 1 Italian; 1 English and 1 German.

SUBMITTED: 21st April 1958.

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KOVALEV, S. I.

14(6),8(0) PLACE 1 BOOK EXPLOITATION SOV/1971
 Akademiya nauk SSSR. Energochebelskiy Institut
 Elektroenergetika, 72p, 1 (Electric Power Engineering, Nr 11) Moscow,
 Izd-vo AN SSSR, 1959. 159 p. Errata slip inserted. 2,800 copies
 printed.

Eds. of Publishing House: P. P. Oparin and Yu. M. Grigor'ev; Tech.
 Ed.: Ye. V. Zelenkov; Editorial Board: Yu. G. Tolok; Doctor
 of Technical Sciences (Rep. Ed.); I. N. Murav'ev; Doctor of
 Technical Sciences, I. S. Stekol'nikov; Doctor of Technical Sci-
 ences, P. I. Zubkov; Candidate of Technical Sciences; I. Larion,
 G. V. Mikhalevich, Candidate of Technical Sciences; I. Larion,
 Candidate of Technical Sciences, and N. D. Bol'shov (Secretary)

PURPOSE: This collection of articles is intended for specialists
 in the various fields of electric power engineering treated in it.

COVERAGE: The first issue of the collection of articles
 "Elektroenergetika" appeared in April 1959. It is published by
 Sov. Energetika, Ministry of the Academy of Sciences, USSR.
 The articles in this issue are based on research and work of the
 authors under the auspices of ERIM. The articles are on a high
 theoretical and technical level and represent original contribu-
 tions to various present-day problems in electrical engineering.
 References are given after most of the articles.

TABLE OF CONTENTS:
 Tolotov, Yu. G., and A. L. Sartilov. Arc Rectifiers With Increased
 Pressure

In 1954 and 1955 several theoretical and experimental investi-
 gations were made at the Institute in order to determine the
 possibility of using hot-cathode arc rectifiers with increased
 pressure for long-distance d-c power transmission. The investi-
 gations were aimed at improving the parameters of E. Marx arc
 rectifiers produced in Germany before and during the war. The
 authors conclude that, despite improvements, modern mercury arc
 rectifiers are superior to the hot-cathode ones and recommend
 use of the former in long-distance d-c power transmission. The
 following organizations and scientific personnel participated
 in the investigations together with ERIM: UNIPE, D.A. Petrov,
 K. M. Korol'kov, R. I. Petrukhovich MGU - N. A. Koptov,
 K. Z. Khodikov and the welding section, Academy of Sciences,
 USSR - N. H. Syvalin, Corresponding Member of the Academy,
 I. D. Kuligin, A. I. Pugin and others. There are 4 references:

Sorokin, L. B., Ya. G. Burzynsky, and S. B. Chizhevskiy. Model of D.C.
 Electric Rectifier. Institute of General and Applied Engineering Lab.,
 Laboratory No. 1, All-Union Air Space Research Institute, Moscow, 12

This dc high-voltage network analyzer (model) was built at the
 laboratory in 1952/53. The following investigations are being
 conducted with its increments of reliability and stability of
 network operation and effect of d-c electric power transmission
 on the static and dynamic stability of an a-c power system.
 The investigations are being conducted under the supervision
 of L. A. Neiman, Corresponding Member of the Academy of Sciences,
 USSR. There are no references.

Khoreva, P. I., and G. P. Monkhova. High-Frequency Oscillations in
 Rectifying Units With Steplike Reactors 20

As a result of investigations conducted at the NIPI, ERIM
 and other organizations, methods were found for damping
 complex oscillations generated in converter installations.
 This was accomplished by switching a bypass circuit consisting
 of capacitors and resistances connected in series into the
 rectifier and power transformer phases. There are 6 refer-
 ences: 2 Soviet, 2 English, 1 German and 1 Italian.

KOVALEV, F.I.(Moskva)

Faulty operation due to the breakdown of a semiconductor rectifier
controlling saturable reactors. Izv. AN SSSR. Otd. tekhn. nauk. Energ.
i avtom. no.5:28-36 S-0 '59. (MIRA 13:1)
(Semiconductors) (Electric current rectifiers)

KOVALEV, F. I., Cand Tech Sci (diss) -- "Investigation of the operation of a three-phase bridge rectifier controlled by saturated reactors". Moscow, 1960.
18 pp (Acad Sci USSR, Power Engineering Inst im G. M. Krzhizhanovskiy), 150 copies (KL, No 14, 1960, 132)

MOSTKOVA, G.P.; KOVAREV, F.I.

Operating conditions of a three-phase bridge rectifier with non-linear anode inductances. Elektroenergetika no.4:133-148 '61.
(MIRA 14:8)
(Electric current rectifiers) (Bridge circuits)

MOSTKOVA, G.P., kand.tekhn.nauk; KOVALEV, F.I., kand.tekhn.nauk

Calculation of the parameters and characteristics of a
semiconductor rectifier with saturable reactor control.
Elektricheskiye no.10:38-46 O '61. (MIRA 14:10)

1. Energeticheskiy institut im. Krzhizhanovskogo.
(Electric current rectifiers)

MOSTKOVA, G.P.; KOVALEV, F.I.

Comparison of networks for connecting saturable reactors used
to control a three-phase transistor rectifier. Elektroenergetika
no.5:90-97 '62.
(Electric current rectifiers) (Magnetic amplifiers)

TOLSTOV, Yu.G.; MOSTKOVA, G.P.; KOVALEV, F.I.; TAFT, V.A., doktor
tekhn. nauk, prof.; ZAVOZIN, L.F., red. izd-va; DOROKHINA,
I.N., tekhn. red.

[Three-phase semiconductor power rectifiers with magnetic
amplifier control] Trekhfaznye silovye poluprovodnikovye
vypriamiteli, upravliaemye drosseliami nasyshcheniya. Mo-
skva, Izd-vo Akad. nauk SSSR, 1963. 171 p. (MIRA 16:7)
(Electric current rectifiers)

ACC NR:	AM6014513	(V)	Monograph	UR/
<p>Kovalev, Feliks Ivanovich; Mostkova, Galina Pavlovna; Sviridov, Artem Fedorovich; Chukilov, Vladislav Fedorovich</p> <p>Marine static/semiconductor converters (Sudovyye staticheskiye/ poluprovodnikovyye/ freobrazovateli) Leningrad, Izd-vo "Sudostrayeniye", 1965, 240 p. illus., bibliog. 1,600 copies printed.</p>				
TOPIC TAGS: ship component, electric energy conversion, frequency conversion, semi-conductor rectifier, electric filter				
PURPOSE AND COVERAGE: This book presents marine static electric power converters (rectifiers, inverters, frequency converters) in semiconductor valves, principles of their action, and a comparison of different basic schemes. It also includes recommendations for the selection of more optimal schemes for marine static electric power converters in semiconductor valves. According to the given design relationship it is possible to determine parameters of basic elements of converter units and construct their operating characteristics. Also included are marine rectifier aggregates in semiconductor valves with regulated and stabilized output voltage and current for supplying various types of loads. External and regulating characteristics are shown, such as the power factor, devices protecting against overcurrents and overvoltages, filters, structures and means of cooling marine rectifier aggregates. The book is recommended for engineers and technicians working with the de-				
Card 1/2		UDC 621.314:629.12		

ACC NR: AM014513

sign and assembly of marine electric power units. It also can be useful to students in ship-building institutes.

TABLE OF CONTENTS (abridged):

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SUB CODE: 13,10 / SUBM DATE: 22Oct65/ ORIG REF: 043/ OTH REF: 025/

Card 2/2

KOVALEV, F.L.

BYKOV, Boris Vladimirovich, ekonomist; VOL'SKIY, V.S., inzhener; KOVALEV, F., inzhener, laureat Stalinskoy premii.

[Generalization and comprehensive introduction of Stakhanovite practice; initiative of innovators of the Sverdlovsk Order of the Red Banner of Labor "Pnevmostroimashina" named after Ordzhonikidze] Oboshchenie i kompleksnoe vnedrenie stakhanovskogo opyta; pochin novatorov Sverdlovskogo ordena trudovogo krasnogo znameni zavoda "Pnevmostroimashina" im. Ordzhonikidze. [Sostaviteli: B.V. Bykov i V.S. Vol'skii] Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1953. 46 p. (MLR 6:7)

1. Sverdlovskiy Ordena trudovogo krasnogo znameni zavod "Pnevmostroimashina" imeni Ordzhonikidze.
(Building machinery industry)

1. KOVALEV^{Mr.}, F.L.
2. USSR (600)
4. Hydroelectric Power Stations
7. Application of F.L. Kovalev's method on the construction of the Khakovka hydro-electric station, Biul.stroi.tekh. 10 no. 7, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

KOVALEV, F.L., kand.tekhn.nauk

Steadfastly introduce progressive techniques into light industry.
Mekh.trud.rab, 11 no.11:36-38 N '57. (MIRA 10:11)
(Industry)

KOVALEV, F. L.
KOVAL'EV, F. L. (Engr)

Production Methods

Dissertation: "Practice of Soviet Industry in the Field of Study, Generalization, and Mass Propagation of Advanced Methods of Work." Cand Tech Sci, Moscow Textile Inst, 1 Apr 54. (Vechernaya Moskva Moscow, 17 Mar 54)

SO: SUM 213, 20 Sep 1954

~~KOVAL'EV, F. I.~~

Daily introduction of outstanding practices. Tekst, prom. 14 no. 12:
4-6 D'54.
(MLRA 8:2)

1. Zamestnik nachal'nika Tekhnicheskogo upravleniya Ministerstva
promyshlennyykh tovarov shirokogo potrebleniya SSSR.
(Textile Industry)

KOVALEV, P.

Guests of Chinese textile workers. Sots.trud.no.9:99-102 S '56.
(MLRA 9:12)

(China--Textile industry)

~~KOVALEV, F.L.~~

With our Chinese friends. Tekst. prom. 17 no.3:54-58 Mr '57.
(China--Textile industry) (MLRA 10:4)

~~KOVALEV, F.L., kand.tekhn.nauk.~~

Ways of developing equipment and methods in the woolen industry.
Tekst. prom. 18 no.8:21-26 Ag '58. (MIRA 11:10)

1. Direktor 'Sentrал'nogo nauchno-issledovatel'skogo instituta shersti.
(Woollen and worsted manufacture)

KOVALEV, F.L., kand.tekhn.nauk, red.; GAMBURG, Ya.Yu., retsenzent; .
FORMAL'SKIY, M.I., retsenzent; KISELEV, M.A., retsenzent; PLEMYANIKOV,
M.N., red.; SUKULOVA, V.Ye., red.; LIOZNOV, A.G., red.; KNAKNIN,
M.T., tekhn.red.

[Manual on wool spinning] Spravochnik po sherstopriadeniiu.
Pod red. F.I.Kovaleva. Izd.2., perer. i dop. Moskva, Izd-vo
nauchno-tekhn.lit-ry RSFSR, 1960. 785 p.

(MIRA 13:12)

l. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut
sherstyanoy prcmyshlennosti.
(Woolen and worsted spinning)

KOVALEV, F.L., kand.tekhn.nauk, laureat Stalinskoy premii;
TERYUSHNOV, A.V., prof.; FEDOROV, K.P.; BARABANOV, L.G.

For a mass subscription to "Tekstil'naia promyshlennost'";
readers' letters. Tekst. prom. 20 no. 11:87 N '60.
(MIRA 13:12)

1. Direktor Tsentral'nogo nauchno-issledovatel'skogo
instituta sherstyany promyshlennosti (for Kovalev).
2. Zaveduyushchiy kafedroy pryadeniya khlopya Moskovskogo
tekstil'nogo instituta (for Teryushnov). 3. Master po detalyam
Remontno-montazhnogo otdela fabriki imeni Frunze (for
Fedorov). 4. Direktor kombinata "Trehgornaya manufaktura"
imeni Dzerzhinskogo (for Barabanov).

(Textile industry--Periodicals)

KOVALEV, F.L.

Applications of research work in the wool industry. Tekst.
prom. 23 no.12:13-16 D '63. (MIRA 17:1)

1. Direktor TSentral'nogo nauchno-issledovatel'skogo instituta
sherstyanoy promyshlennosti (TsNIIShersti).

KOVALEV, F.L., kand. tekhn. nauk

Use of synthetic fibers in the assortment of woolen cloth.

Tekst. prom. 24, no.9:71-75 S '64.

(MIRA 17:11)

1. Direktor: Tsentral'nogo nauchno-issledovatel'skogo instituta
sherstyanoy promyshlennosti.

KOVALENKO, V.N.

Double colorimetry in testing the activity of preparations of
strophanthus and digitalis. Apt.delo 7 no.2:50-55 Mr-Ap '58.

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta perelivaniya
krovi.

(DIGITALIS) (STROPHANTHUS) (COLORIMETRY)

KOVALENKO, V.N., starshiy nauchnyy sotrudnik

Work of blood service installations of the R.S.F.S.R. Akt.vop.perel.
krovi no.7:20-27 '59. (MIRA 13:1)

1. Organizatsionno-metodicheskiy sektor Leningradskogo instituta
perelivaniya krovi.
(BLOOD--COLLECTION AND PRESERVATION)

KOVALENKO, Valentin Nikolayevich; VINOGRADOV, V.M., red.; RULEVA, M.S.,
tekhn. red.; CHUNAYEVA, Z.V., tekhn. red.

[Pharmacology textbook for medical schools] Uchebnik farmakologii
dlia meditsinskikh uchilishch. Izd.4., dop. i perer. Leningrad,
Gos. izd.-vpo med. lit-ry Medgiz, Leningr. otd-nie, 1961. 326 p.
(MIRA 14:9)

(PHARMACOLOGY)

KOVALENKO, V. N.; MIKHAYLYANTS, O. A.; SALIDZHANOV, S. B.;
SHEYKL-ZADE, R. M.

Mineral wool made of raw material from Tashkent District.
Sbor. nauch. trud. NII po stroi. ASIA no.2:63-68 '61.
(MIRA 16:1)

(Tashkent District—Mineral wool)

VOROB'YEV, S.P.; KOVALENKO, V.N.

Treatment of epilepsy with restricted fluid intake and salt-free diets in association with drug therapy. Vop.psikh.i nerv. 8:383-388 '62.
(MIRA 17:4)

1. Iz 7-go nervnogo organicheskogo otdeleniya Nauchno-issledovatel'skogo psikhonevrologicheskogo instituta imeni V.M.Bektereva (zav. otdeleniyem S.P.Vorob'yev, cir. instituta - B.A.Lebedev).

KOVALENKO, V.N.; MIKHAYLYANTS, O.A.

Briquetting less dolomite charges in the production of mineral
wool. Sbor. nauch. trud. NII po strel. ASIA no.4,84-91 '63.
(MIRA 12(8))

YEREMENKO, V.V.; KOVAL'ENKO, V.N.

Relation of the effective adhesiveness of soil pastes to shear stress.
Dokl. AN Uz. SSR no.8:35-38 '58. (MIRA 11:9)

1.Institut sooruzheniy AN UzSSR. Predstavлено akademikom AN UzSSR
M.T. Urazbayevym.
(Soil mechanics)

YEREMENKO, V.V.; KOVALENKO, V.N.

Specific plastic deformation as an index of the plasticity of
soils. Trudy SANKIRI no. 98:47-54 '59. (MIRA 14:1)
(Soil mechanics)

KOVALENKO, V.P.

Meteorological service for the agriculture in the Uzbek S.S.R.
Meteor. i gidrol. no. 5:51-53 My '57. (MIRA 10:8)
(Uzbekistan--Meteorology, Agricultural)

KOVALENKO, V. P.

PA 54/49T3B

DESR/Electricity
Transmission Lines

Insulators

Dec 48

"Mass Ignition of Towers From Leakage Currents,"
V. P. Kovalenko, T. P. Musatov, Engineers, 1½ pp

"Elek Stants" No 12

Describes 21 cases of ignition of wooden L-shaped towers from leakage currents in 1946 in a southern regional network. Cases occurred in sections not exposed to contamination from industrial enterprises, majority during wet months. Analysis showed that dust accumulated in insulators during prolonged dry

54/49T3B

DESR/Electricity (Contd)

Dec 48

soil. Dust was composed of 40% organic impurities, 50% sand, and 10% limestone. Light rain was insufficient to wash insulators but increased leakage currents. Recommends coating poles with fireproof, current-conducting material, and shunting danger points of towers by metal bands.

54/49T3B

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000825520016-2

MUSATOV, T.P., inzhener; KOVALENKO, V.P., inzhener.

Connecting powerful synchronous compensators without drying. Elektricheskiye
no. 8:59-60 April '59.
(MLRA 6:8)
(Electric transformers)

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000825520016-2"

KOVALENKO, V.P.

MUSATOV, T.P., inzhener; KOVALENKO, V.P., inzhener.

Control of the connections of steel and aluminum leads of the
open part of a high-voltage substation. Energetik 5 no.8:31
Ag '57.

(MLRA 10:10)

(Electric substations)

KOVALENKO, V.P.

SOV-91-58-4-14/29

AUTHORS: Musatov, T.P. and Kovalenko, V.P., Engineers

TITLE: "35 kv" Current Transformers with "PB" Type Insulators
(Transformatory toka 35 kv vnutrenney ustanovki na izolyatorakh tipa PB)

PERIODICAL: Energetik, 1958, Nr 4, pp 19-20 (USSR)

ABSTRACT: In some distribution systems, the 35 kv current transformers of the "TF" type still have bakelite insulation. They are not being manufactured any more by the Soviet industry, but a great number of them are still in service. For the replacement of bakelite current transformers, the workshops of the Stalinskiy setevoy rayon Donbassenergo (Stalino "Donbassenergo" Network Sector) have manufactured current transformers, the cores of which were fixed on the flange of "PB-35" type bushings (Figure 1). There are 25 current transformers of this kind in service. For manufacturing the cores for current transformers, transformer steel of "E4A" grade or steel taken from old built-in 110 kv current transformers is utilized. Asbestos-cement or asbestos-slate baffles rigidly fastened between bakelite "TP-35" type current transformers can temporarily increase their service reliability.

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SOV-91-58-4-14/29

"35 kv" Current Transformers with "PB" Type Insulators

There is 1 photo and 2 diagrams.

1. Transformers--Manufacture 2. Transformers--Materials

Card 2/2

Krušen'ko, V.P.

PAGE 1 BOOK EXPLANATION 807/5778

Verlag der Naukovedenschiye plavotykh knizhnykh
Avtorostatystika i priborostroeniye: shornik nauchnykh trudov, vyp. 1.
(Instrument and Equipment Materials: Collection Scientific Works, No. 1)
Kiev, Goszashchita tenu, 1959. 107 p. 5,000 copies printed.

Ed.: V. Denitsky; Tech. Ed.: K. Ossorov; Editorial Board: P.M. Mol'nik
(Gal'f et al.), V.Z. Shary, O.G. Kryshchuk, I.A. Orlina, (perf. Ed.),
I.S. Sloboda, and H.V. Tarchuk.

Purpose: This collection of articles is intended for scientific and technical
workers and for students of schools or higher education specializing in
automation, telecommunications, and computing.

Content: The collection contains papers on the development of new instruments,
chemical and power engineering and on the development of new instruments,
telemechanical units, and a process control system for current lathe
A bibliography on automatic analysis of solutions contains 56 items.
22 authors, 34 articles, 5 German, 4 French and 1 Polish is included. No person
names are mentioned.

AUTOMATION OF INDUSTRIAL PROCESSES

- | | |
|---|----|
| Korobov, M.V., A.I. Strelchenko, V.M. Korobovskiy, V.I. Kostylev,
A.I. Syrnik, V.M. Artyukhov. Automation System for Open-Search
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| Shender, F.M., V.I. Kostylev. New Method for Selecting
Control of Blast Distribution in Open-Search Mines | 11 |
| Shestopalov, F.M., B.G. Mikhaylov. Automatic Inspection and
Control of Blast Distribution in Open-Search Mines | 17 |
| Dorozhkin, R.N. New Indirect Method for the Automatic Analysis of
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Control System of Turret Lathe 151 p. 29 | 29 |
| Semenov, G.A., and O.V. Portokaly. Shift Pitch Called "Magnetic
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AUTOMATIC EQUIPMENT

- | | |
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Economic Distribution of Active Load in Power Systems | 50 |
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SIN'KOV, V.M.; KOVALENKO, V.P.

The "Ekran-2" computer for economic distribution of active load in
electric power systems. Avtom.i prib. no.1:50-54 '59.(MIRA 13:10)
(Electronic analog computer)

SIN'KOV, V.M., kand.tekhn.nauk; ZASENKO, V.L., inzh.; KOVALENKO, V.P.,
inzh., FOL'KMAN, K.Yu., inzh.

Computer for calculating the distribution of active loads with
a given fuel consumption. Elektrichestvo no.8:5-15 Ag '60.
(MIRA 13:8)

1. Institut avtomatiki Gosplana USSR.
(Electronic analog computers)
(Electric power distribution)
(Electric power plants)

KOVALENKO, V.P., inzh.; SAMARETS, V.D., inzh.

Raising discharge voltages in the RVP series 35kv. excess
voltage suppressor, Energetik 8 no.1:24-25 Ja '60.
(MIRA 13:5)
(Voltage regulators)

BUYEVICH, V.V.; GNEDIN, L.P.; KOVALENKO, V.P.

High-speed networks for compensating the brake action of excess losses and moment of inertia in a synchronous model generator.
Sber.rab.po vyp.elektronekh.no.8:318-326 '63.

(MIRA 16:5)

(Electric generators) (Rotating amplifiers)

KOVALENKO, V.P. (Klyev)

Simplified calculation of the dynamic stability of a power system using a digital computer. Izv. AN SSSR, Energ. i transp. no. 6:6/5-679 N-D '63. (MIRA 17:1)

KOVALENKO, V.P.

Phase transfer characteristics of resonant elements. Trudy Inst.
elektrotekh. AN URSR 20:109-116 '63.

(MIRA 17:11)

BUSIOV, L.I.; KOVALENKO, V.P.; SHESTOPALOV, V.N.

Receiving device of a multiple-message remote control system.
Trudy Inst. elektrotekh. AN URSR 20:190-197 '63.
(MIRA 17:11)

KOVALENKO, V.P. (Kiev)

Equivalent transformation of complex electric power systems.
Izv. AN SSSR. Energ. i transp no.2:182-191 Mr.-Ap'64.
(MIRA 17:5)

KOVALENKO, V.P., starshiy prepodavatel'

Automatic control by chain-type variable speed drive.

Les., sum. i der. prom. no.1:14-20 '65.

(MIRA 18:12)

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000825520016-2

SROCKA, I.F., inzh.; KOVALENKO, V.P., inzh.

Operation of blast fans of power transformers. Energ. i elektrotekh.
prom. no.2859-60 Ap-Je '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000825520016-2"

L 52708-65 ACCESSION NR: AP5012639	EWT(1)/EW ⁽ⁿ⁾ (n) Pab-10/P1- IJJ	(r)-2/EWG(m)/EPA(w)-2/BWP(t)/EWP(b) (c) - JD/W/M/JG/AT	Pz-6/Po-4 UR/0051/65/018/005/0931/0933 53.9
AUTHOR: Morozov, N. D.; Masic, I. I.; Dydyyun, Yu. A.; Kovalevko, V. P.			17 B 21
TITLE: Determination of the electron temperature of a cesium plasma in a thermoelectric diode by spectral methods			
SOURCE: Optika i spektroscopija, v. 18, no. 5, 1969, 931-933			
TOPIC TAGS: cesium plasma, electron temperature, spectroscopy, thermionic energy conversion, thermionic diode, discharge mode, arc mode			
ABSTRACT: Spectrometric methods were used because of the difficulties of using the probe method for measuring the electron temperature in a diode with an electrode spacing of only a few millimeters. Studies of intensity distributions were made in the continuous recombination spectrum and in the bright-line radiation spectrum. In the preliminary experiments a UM-2 monochromator with photoelectric registration was used in the 4000--4900 Å wavelength range. This instrument was replaced later by a DS-1 spectrometer with photographic and photovoltaic registration, and measurements were made in the 4000--6300 Å range. The diode contained a TiC ₂ cathode and an Mo anode. The interelectrode distance was 5 mm, the contact potential difference, about 1.5 v., and the cesium vapor pressure, about 0.3 mm Hg. The monochromator			
Car 1/2			

L 527(8-65)	ACCESSION NR: AP5012639	<p>measurments, which led to values corresponding to electron temperatures $T_e = 2500K$, indicated a linear n_e/i dependence. The experiments made with the spectrometer showed that at $i_0 = 10 \text{ amp/cm}^2$ the characteristics are similar to those of a normal arc discharge spectrum in cesium vapor. The second doublet of the principal series 4555/93 Å and the secondary series of cesium at $\lambda > 5000 \text{ Å}$ were clearly visible. Measurements made at $i_0 = 1 \text{ amp/cm}^2$ indicated an electron temperature of 2300K. This value did not change at $i = 1/2 i_0 = 5 \text{ amp/cm}^2$, the point at which the combined mechanism of thermal charge generation on the cathode and volume ionization by collisions should start acting. It is emphasized that the Maxwellian velocity distribution of the electrons and the observed uniformity of the temperatures of slow and relatively fast electrons may help to explain the nature of phenomena in discharge plasma not only in a close-spaced diode but also in the case of regular arc discharge instruments. "The authors thank I. I. Kendilenko for making available to them the DIS-4 spectrometer." Orig. art. has: 2 figures. [ZL]</p>		
ASSOCIATION: none				
SUMMITED:	28Apr64	ENCL:	00	SUB CODE: NP, EC
NO REI SOV:	005	OTHER:	006	ATD PRESS: 4012
Card	72			

KOVALENKO, V.R.

Acute thrombopenia in Basedow's disease. Probl. gemat. i perel.
krovi 9 no.3:55-56 Mr '64. (MIRA 17:10)

1. Khirurgicheskoye otdeleniye (zav. A.F. Petrov) Belgorodskoy
oblastnoy bol'nitsy (glavnnyy vrach G.M. Okulov).

KOVALENKO, V.R. (Belgorod, ul. Bogdana Khmel'nietskogo, 73, kv.27)

Ways to prevent complications in the treatment of thrombophlebitis.
Vest. khir. §2 no.3:107-111 Mr '64. (MIRA 17:12)

1. Iz khirurgicheskogo otdeleniya (zav. - A.F.Petrov) Belgorodskoy oblastnoy bol'niцы (glavnnyy vrach - G.M.Okulov).

KOVALENKO, V.S.

137-58-1-1233

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 165 (USSR)

AUTHORS: Bobro, Yu.G., Kovalenko, V.S.

TITLE: Nitriding of Iron with Spheroidal Graphite (Azotirovaniye chuguna s sharovidnym grafitom)

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1957, Vol 9, pp 157-167

ABSTRACT: An investigation in the nitriding (NI) of spheroidal-graphite iron (SGI) and lamellar-graphite iron is made. The microstructure, depth, and microhardness of nitrided iron is studied on the PMT-3 instrument. For purposes of comparison, experiments in the NI of technically pure Fe and also of steels 20, U7 and 60S2 were conducted. In all types of NI the degree of dissociation of NH₃ remained within the 30-45% interval. The temperature was studied in the 650-770° interval. The nitrided layer of SGI was 0.25-0.30 mm thick and consisted of a weakly etching thin layer of ϵ phase (and γ' phase) and a dark $\epsilon + \gamma'$ eutectoid. The nitrided layer was distinguished by elevated hardness (891-945 units) and corrosion resistance (in tap water). The duration of the NI process may be reduced by raising the temperature to 720°, by brief (2-3 hours) holding, hardening

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137-58-1-1233

Nitriding of Iron with Spheroidal Graphite

after NI in water, and dilution of the NH₃ by technical N₂. Spheroidal graphite proves to be the most desirable form in iron when the latter is subjected to NI, as under these conditions the diffusion of N occurs under the most favorable circumstances owing to the discreteness of the graphite. An increase in the Si content is unfavorable, and a reduction in bound C is desirable for NI.

1. Iron--Nitration 2. Graphite--Applications

L.D.

Card 2/2

9,1300

24222
S/142/61/004/001/001/008
E033/E135

AUTHORS: Kovalenko, Ye.S., and Kovalenko, V.S.

TITLE: [A contribution] to the theory of diaphragmal waveguide of rectangular cross-section

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1961, Vol.4, No.1, pp. 11-25

TEXT: Only LE and LM waves are possible in a diaphragmal waveguide of rectangular cross-section, such as shown in Fig.1. Analysis of these waves leads to an infinite set of algebraic equations. The object of this article is to investigate these equations, to indicate a method for their solution and to apply the results to numerical calculations of the harmonics and boundary frequencies of the LE and LM waves. The possible fields of the waveguide are described by the X-components of the Hertz vectors which for the inter-action space have the form:

$$\prod_{m,n} = \sum_{s=1}^{\infty} \frac{X_s}{k_y^s} \frac{\sin k_y^s y}{\cos k_y^s q} \sin \frac{v\pi}{a} x \cdot e^{j\beta_s \left(z - \frac{D}{2}\right)}; \quad (1)$$

Card 1/5

A contribution to the theory of.....

24222
S/142/61/004/001/001/008
E033/E135

$$\Pi_{ex}^c = \sum_{s=-\infty}^{+\infty} \gamma_s^c \left[\frac{\cos k_y s y}{\sin k_y s q} \cos \frac{v\pi}{a} x \cdot e^{j\beta_s (z - \frac{D}{2})} \right]; \quad (2)$$

where

$$\beta_s = \beta_0 + \frac{2\pi s}{D}; \quad k_y s = \sqrt{k^2 - \frac{\pi^2 v^2}{a^2} - \beta_s^2}; \quad k = \frac{\omega}{c}.$$

$v = 0; 1; 2; \dots$

The upper row of indices and functions in Eqs. (1) and (2) refer to the synphase waves, and the lower row to the anti-phase waves. The vector Π_{lmx} gives the LE waves and Π_{lex} the LM waves. From Eqs. (1) and (2) and the analogous Hertz vectors for the resonator spaces an infinite set of algebraic equations is obtainable. In earlier work (Ref.1: Ye.S. Kovalenko, V.I. Shimanskiy, same journal, Vol.3, 1960, No.2, p 153) Walkinshaw's method was used, but here the equations expressing the equality of the E_z components are resolved as particular functions of the inter-action space, and the infinite set of

Card 2/5

24222

A contribution to the theory of.... S/142/61/004/001/001/008
E033/E135

equations thus obtained. The corresponding sets obtained by Walkinshaw's method are derived from these equations, but the reverse is not true unless $d = D$. The method of solving the infinite system is described. The solution x_i of an infinite regular system of algebraic equations with positive coefficients can be determined within an upper limit \bar{x}_i and lower limit \tilde{x}_i obtained from finite equations. The upper limit \bar{x}_i can be made more accurate by using V.M. Koyalovich's theorem on "limitants" and a new limit for the unknown x_i obtained. The process is successively repeated. Two theorems are developed to simplify the procedure. The method is then applied to solve the infinite system for a regime of II-oscillations of LE waves and to obtain the critical frequencies of the LM and LE waves. The results show that fast LM waves can exist along with the "operational" slow LE waves, and also show how the critical frequencies of the LM waves depend on the waveguide dimensions. This work was undertaken under the guidance of Professor Doctor of Physical and Mathematical Sciences A.A. Vorob'yev. There are 4 figures, 1 table and 6 references: 5 Soviet-bloc and 1 English.

Card 3/5

24222

A contribution to the theory of..... S/142/61/004/001/001/008
E033/E135

The English language reference reads as follows:

Ref.2: W. Walkinshaw. "Notes on Wave Guides for Slow Waves",
J. Appl. Phys., 1949, V.20, No.6, 634.

ASSOCIATION: Kafedra teoreticheskikh osnov elektrotehniki,
Tomskogo ordena Trudovogo Krasnogo Znameni
politekhnicheskogo instituta im. S.M. Kirova
(Department of Theoretical Principles of Electrical
Engineering, Tomsk (Red Banner of Labour)
Polytechnical Institute imeni S.M. Kirova)

SUBMITTED: Initially April 24 1960, and after revision
May 20, 1960

Card 4/5

KONEV, F.A.; KRAYNYUKOV, N.I.; KOVALENKO, V.S.,

Determination of the durability of the capillaries of small ampules.
Med. prom. 14 no.5:42-44 My '60. (MIRA 13:9)

1. Khar'kovskiy nauchno-issledovatel'skiy khimiko-farmatsevicheskiy
institut.
(DRUG INDUSTRY)

KOVALENKO, V.S.

Attachment for examining fractures under the microscope. Zav.lab.
26 no.3:369 '60. (MIRA 13:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.
(Metallography)

39964

S/181/62/004/008/007/041

B125/B104

24,68205

AUTHORS: Bronshteyn, I. M., and Kovalenko, V. S.

TITLE: Energy distribution of inelastically scattered electrons in
solids

PERIODICAL: Fizika tverdogo tela, v. 4, no. 8, 1962, 2047-2049

TEXT: The energy distribution of electrons inelastically scattered in Al, Ni, Ag, and Pb was investigated using a quasi-spherical capacitor with a suppressor grid. Layers of these metals were condensed in vacuo on a glass pin. Complete curves for the slowing down and the energy distribution of inelastically scattered electrons of sharply focused beams (~ 2 mm in diameter) with energies of 0.6, 0.9, 1.5, and 3 kev were plotted for the energy range $50 \leq E \leq E_p$ and with particular accuracy for $E_p \pm 10$ ev.

Fig. 6 shows the energy distribution for $E_p = 1.5$ kev. Similar results were obtained for $E_p = 3$ kev. At all these energies there occur also elastically scattered electrons, but their number diminishes with increasing

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Energy distribution of inelastically...

S/181/62/004/008/007/041
B125/B104

E_p. The proportion of elastically scattered electrons amounts to 2-4 % of the total number of electrons and up to 14 % of all high-energy electrons (up to 50 ev). The form of the energy distribution shown in Fig. 6 is due to inelastic electron scattering at various depths in the scatterer. The fastest electrons were scattered in the layers near the surface of the scatterer. There are 2 figures.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertseva (Leningrad State Pedagogical Institute imeni A. I. Gertsen)

SUBMITTED: February 22, 1962

Fig. 6. Energy distribution of inelastically reflected electrons. The areas behave like the coefficients η of inelastically reflected electrons. For Be and Al the scale on the coordinate axis is three times larger than for Ag, Ni, and Pb. (1) Be; (2) Al; (3) Ni; (4) Ag; (5) Pb.

Card 2/2 Z

KOVALENKO, V.S.

Fractographic method used for investigating structural characteristics of impact fractures. Zav.lab. 28 no.3:344-347 '62.
(MIRA 15:4)

1. Donetskij filial Ukrainskogo nauchno-issledovatel'skogo
instituta metallov.

(Steel--Metallography)

KOVALENKO, V.S., melkhanik

Automatic control of pumping stations. Neftianik 6 no.10:15-17
0 '61. (MIRA 14:10)

1. Voskresenskaya nefteperekachiayushchaya stantsiya.
(Pumping stations)
(Automatic control)
(Petroleum Pipelines)

TRET'YAKOV, Ye.V., kand. tekhn. nauk; KOVALENKO, V.S., inzh.;
CHUMACHENKO, V.S., inzh.; KISELEV, I.M., inzh.

Using compacted addition alloys in the production of low carbon
steel with zirconium. Met. i gornorud. prom. no.6:29-30 N-D '62.
(MIRA 17:8)

1. Trest "Pontasstsvetmet" (for Tret'yakov, Kovalenko).
2. Donetskiy filial Ukrainskogo nauchno-issledovatel'skogo
instituta mettallov (for Chumachenko, Kiselev).

BRONSHTEYN, I.M.; KOVALENKO, V.S.

Energy distribution of inelastically scattered electrons
in solids. Fiz. tver. tela 4 no.8:2047-2049 Ag '62.
(MIRA 15:11)
1. Leningradskiy gosudarstvennyy pedagogicheskiy
institut imeni A.I. Gertseva.
(Electrons—Scattering)

KCVALENKO, V.S., inzh.

Heat treatment of low carbon steel with zirconium additives.
Mashinostroenie no. 5:36-38 S-0 '63. (MIRA 16:12)

1. Donetskiy filial Ukrainskogo nauchno-issledovatel'skogo
instituta metallov.

L 11251-63 TIA (F) EFT(1)/E/P(g)/EFT(m)/YFD/HDS/1-2/3W2/ECC(b)-2/ES(t)-2
A/PTC/ISD/ESD-3/RADC/1P IC/1WL P1-L1/P1-L1/Po-L1 JHE/WH/WG/IJP(C)/K/EH

ACCESSION NR: AP3004071

S/0109/63/008/008/1374/1384

AUTHOR: Kovalenko, Ye. S. Kovalenko, V. S.

88
87

TITLE: On the theory of a maser delay system

25 25

SOURCE: Radiotekhnika i elektronika, v. 8, no. 8, 1963, 1374-1384

TOPIC TAGS: maser, TW maser, traveling-wave maser, delay element, comb delay element, wave dispersion, population inversion, field harmonics

ABSTRACT: Expressions are derived for several parameters which govern the operation of a TW maser. In particular, attention is given to a comb-type waveguide delay element common to such systems, whose geometry is shown in Fig. 1 of the Enclosure. On the basis of this model, equations are developed for the wave dispersion, field polarization, and population inversion probability, all as functions of comb-structure geometry and ruby placement. For finding wave dispersion a TEM mode is assumed, and the case is analyzed for a wave propagating vertically upward through one tooth element of the comb. A combination of three effects occurs when the wave arrives at the top surface of the tooth: simple reflection, reflection with transformation to a higher TEM mode, and passage of a portion of the wave into the open waveguide volume above the element in a refracted form.

Card 1/42

L 14254-63

ACCESSION NR: AP3004771

The equivalent circuit at the top surface of the element appears as a conductance and shunt capacitance; thus, the dispersion equation is expressed in terms of these parameters. The problem is then reduced to finding useful expressions for the conductance and capacitance; this is done under the simplifying assumption that the generation of the higher wave modes noted above need not be taken into account. With proper alterations, the resultant expressions can also be applied to other variants of comb geometry. Several such arrays are examined, including one with double rows of teeth and another with a partial filling of dielectric material in the guide. In addition, the expressions obtained are applicable for calculating rectangular resonator sections containing one or more rod elements, as are used in some lasers. The validity of the equations derived is checked by comparing the results of calculations of wave dispersion with experimental values; they are in good agreement. Field polarization and the probability of population inversion are discussed as functions of ruby location with respect to the comb structure, and it is shown that field harmonics act to reduce the inversion probability and hence should be taken into account in calculating the operation of such systems. The expressions derived are both more accurate and more generally applicable than those advanced to date, owing to the use of the capacitance-conductance analog and to account being taken of the higher harmonics effect. Orig. art. has: 5 figures and 32 formulas.

Card 2/42

ACCESSION NR: AP4014253

S/0133/64/000/002/0163/0167

AUTHORS: Kovalenko, V. S.; Murav'yev, V. N.; Filina, L. F.

TITLE: The effect of Zr on the nature and distribution of nonmetallic inclusions in carbon steel

SOURCE: Stal', no. 2, 1964, 163-167

TOPIC TAGS: carbon steel, steel, nonmetallic inclusion, inclusion, zirconium, zirconium dioxide, baddeleyite, alumina, zirconium sulfide, iron sulfide, manganese sulfide

ABSTRACT: The composition and distribution of nonmetallic inclusions in carbon steel were studied by determining the quantity of ferrozirconium and the method of its dispersal in steel. It was established that: 1) Zr was an active deoxidizer and that it formed zirconium dioxide inclusions (baddeleyite), the content of which increased sharply with the addition of Zr up to 0.3%. Simultaneously, the quantity of alumina was lowered; 2) the baddeleyite inclusions were often distributed in bands parallel to the direction of metal rolling (the quantity and length of these bands were decreased when steel contained 0.09-0.11% Zr); 3) the introducing of Zr into the ladle produced better results than its introduction into the oven; 4) Zr

Card 1/2

ACCESSION NR: AP4014253

admixtures up to 0.10% transformed plastic sulfides of Fe and Mn into nonplastic ones and replaced some Fe and Mn. Further increase of Zr caused the appearance of stable carbosulfides. Hexagonal sulfide ZrS₂ was formed in steel containing more than 0.30% Zr. "The chemical analyses were made by G. M. Shcherbakova (deceased), A. P. Vazhinskaya, and A. V. Afanas'yeva." Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Donetskiy n.-i. institut chernoy metallurgii (Donetsk Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: 00

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 005

OTHER: 005

Card 2/2

ACCESSION NR: AP4030665

S/0129/64/000/004/0030/0031

AUTHOR: Kovalenko, V. S.; Zats, Ye. L.

TITLE: Effect of zirconium on the corrosion resistance of steel.

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 4, 1964, 30-31

TOPIC TAGS: corrosion resistance, carbon steel, zirconium, zirconium containing steel, anodic passivation, corrosion, microcathode formation

ABSTRACT: The corrosion resistance in water of carbon steels containing 0.16-0.22% C and 0.03-0.05, 0.07-0.16 and 0.20-0.42% zirconium was examined. Up to 0.05% Zr had essentially no effect, but increasing the Zr content from 0.05 to 0.12% greatly reduced the corrosion. The corrosion rate remained constant with additions of Zr in excess of 0.12%. The absolute value for the corrosion resistance of 0.42% Zr-containing steel was about two times that of the 0.03-0.7% Zr-containing steels; the weight loss was stabilized faster, i.e., the anodic passivation was more rapid in the steel containing higher amount of Zr. The effect of Zr on the cathodic process was expressed in the formation of a greater number of microcathodes which did not affect the corrosion rate. Orig. art. has: 2 figures.

Card 1/2

1-57-32-1 EWT(1)/EPF(1), EWT(1)-2/EWA(3)/EWP(3)/EWP(3)/ENP(6) PD-4 J.PD(1)
ACCESSION NR: AP50182 D/WN/JG/WB DD/1304/64/000/006/0054/0055

AUTHOR: Iovlenko, V. I. (Engineer); Zata, Ye. L. (Engineer)

TITLE: Corrosion resistance of low-carbon zirconium steel in acid and alkaline media

SOURCE: Mashinostroyenie, no. 6, 1964, 54-55

TOPIC TAG: zirconium steel, corrosion resistance, corrosion resistant steel, alkali, hydrochloric acid, sulfuric acid, nitric acid, aqueous solution

ABSTRACT: The use of high-alloy steels in cases where cheaper, low-alloy steels could be employed, is a consequence of the fact that the corrosion resistance of low-alloy steels has been little studied.

Zirconium is one of the chemical elements whose addition results in a change in corrosion resistance.

The authors studied a steel of the following composition (%): C = 0.16 - 0.21; Mn = 0.18 - 0.70; Si = 0.10 - 0.30; S = 0.031 - 0.042; P = 0.016 - 0.033; and Cr, up to 0.36.

Card 3/4

I 5839-3

ACCESSION NR: AF5018877

For acid media, HCl, H_2SO_4 and HNO_3 were used in various concentrations at various temperatures; the corrosion index was taken as the absolute or the relative loss in weight (average for three samples). The samples for dilute HCl and H_2SO_4 were 55 x 27 x 3 mm in size; for dilute HNO_3 and all the concentrated acids, 25 x 27 x 3 mm.

It was established that the corrosion resistance of zirconium steels in a 20% aqueous solution of HCl or H_2SO_4 (under average conditions but with increased temperature) is significantly higher than that of carbon steel, and that the difference is apparent even at a content of 0.05% Zr. A steel with 0.3% Zr, tested in boiling 20% HCl, exhibits slightly more than 20% of the weight loss shown by the steel without zirconium.

Thus, additions of zirconium raise the corrosion resistance of low-carbon steels in non-chlorinating solutions of dilute HCl and H_2SO_4 . Dilute HNO_3 (20, 30 and 50%) causes the greatest corrosion, but corrosion is less than for steels with a higher carbon content.

Reduced weight losses, as compared with low-carbon steels, is characteristic in every instance. With only a content of 0.05% Zr, high-zirconium steels tested in 20 and 30% HNO_3 , exhibit lower corrosion resistance than low-carbon steels. In dilute HNO_3 of higher concentration (more than 30%),

Cont'd 2

1-5 (S)

ACCESSION NR: AP501887

Total weight loss cannot serve as a precise criterion of acid resistance because of the nature of the kinetics of the corrosion process at such concentrations.

The results of the tests in concentrated acids showed that zirconium steels retain their resistance superiority in concentrated HCl, which is non-oxidizing at any concentration, but low-carbon steels are more resistant in this case.

The stability of the tested steels in concentrated H_2SO_4 and HNO_3 is practically identical; here, the presence of Zr is not a factor.

To test alkali resistance, special samples with a zirconium content of 0 - 0.05 - 0.09 - 0.14 - 0.20 - 0.33 - 0.35% were placed in a boiling aqueous solution of 60% lithium nitrate and 1% ammonium nitrate, and examined every 10 hours. After 20 hours cracks were observed in the case of steels with up to 0.14% Zr; in the case of steels with 0.33 and 0.36% Zr, cracks were observed after 40 hours. The cracks, as a rule, were formed in the boundaries of ferrite grains; each main crack had a number of branches along the boundary of neighboring grains.

Card 3/1

L 57159-6
ACCESSION NR: AF501877

From these results it is concluded that zirconium strongly raises the corrosion resistance of carbon steels to cracking, the influence being exhibited even in the case of relatively small additions and proportional to its total content.

ASSOCIATION: none

SUBMITTED: OO

ENCL: OO

SUB CODE: MM, IC

NR REF 807: OOO

OTHER: OOC

JPRS

Car 4/4

BRAUN, M.P.; KOVALENKO, V.S.; ZATS, Ye.I.

Effect of zirconium on kinetics of carbide coalescence in pro-
longed isothermal heating of carbon steel. Izv. vys. ucheb. zav.;
chern. met. '7 no.12:122 '64 (MIRA 13:1)

1. Institut Metallurgogo proizvodstva AN UkrSSR i Donetskiy nauchno-
issledovatel'skiy institut chernoy metallurgii.

KOVALENKO, V.S.; MURAV'YEV, V.N.; FILINA, L.F.

Effect of zirconium on the nature and distribution of nonmetallic
inclusions in carbon steel. Stal' 24 no.2:163-167 F '64.

(MIRA 17:9)

1. Donetskiy nauchno-issledovatel'skiy institut chernoy metallurgii.

L 7822-65 EPA(v)-27 EWT E/EMA(m)-2 Pt-7/Pab-10 IJP(c)
 ACCESS(1) NR: AR4049.13 S/0275/54/000/009/1059/1059
 621.384.6

SOURCE: Ref. zh. Elektronika i yego primeneniye. Svojnyy tom, Abs. 9A400

AUTHOR: Kovalenko, V. S., Ol'shanskiy, A. P.

TITLE: Investigation of rod-type delay systems used in accelerators /9

CITED SOURCE: Sb. Elektron. uskoriteli. M., Vyssh. shkola, 1964, 102-109

TOPIC TAGS: delay systems, rod delay system, accelerator

TRANSLATION: The rod-type delay systems are considered whose operating wavelength is practically independent of all cross-sectional dimensions. The dispersion equation of such a system is analyzed, and the delay is determined. The system Q-factor and the coupling resistance are calculated. The dispersion characteristic was investigated experimentally by a resonance method. The coupling resistance was measured by a disturbance method, using a calibrated probe. Good agreement between the estimate and measured values proved that the developed formulas can be used for calculating the rod-type delay system.

SUB-CODE: EC, NP

ENGL: OO

Con: 1/1 1/2

L 1302-66 EWT(m)/EWP(w)/EWP(n)-2/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(z)/EWP(y)/
ACCESSION NR: AP5022348 EWA(c) IJP(c) JD/MM/JG/HM UR/0135/65/000/009/0013/0015 53
621.791.011:546.831:669.15-194 47

AUTHOR: Savchenkov, V. A. (Candidate of technical sciences); Sotnik, I. S.
(Engineer); Kovalenko, V. S. (Engineer)

TITLE: Effect of zirconium on the weldability of low-carbon steel

SOURCE: Svarochnoye proizvodstvo, no. 9, 1965, 13-15

TOPIC TAGS: zirconium, low carbon steel, weldability, brittleness, impact strength, rupture strength, ferrite, pearlite

ABSTRACT: To clarify the conflicting available data on the effect of zirconium on the weldability of low-carbon steel, the author investigated the effect of Zr on the properties of the metal of the near-weld zone, weld metal, and welded-joint metal, as well as on the resistance of the weld metal to the formation of hot cracks. Microstructural examination of specimens taken from 11 experimental melts containing different percentages of Zr (0.05 to 0.35%) revealed that in all cases the structure was ferritic-pearlitic. The properties (impact toughness and the temperature of brittle fracture) of the metal of the near-weld zone were

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ACCESSION NR: AP5022348

investigated by means of impact tests of notched specimens (notched at the fusion line). It was found that in the specimens containing more than 0.1% Zr the impact strength and yield point decrease while the critical temperature of brittle fracture increases, as a result of the decrease in the amount of the pearlitic component, owing to the formation of zirconium carbide and the increase in the brittleness of Zr-alloyed ferrite. The properties of welded joints and weld metal were determined by means of tensile, bending, and impact tests of manually and automatically butt-welded specimens containing from 0.05 to 0.60% Zr and were found to follow the same pattern as in the case of the metal of the near-weld zone: as the percentage of Zr increases, impact toughness decreases and critical temperature of brittle fracture increases and the weld metal's resistance to the formation of hot cracks decreases. Conclusion: zirconium adversely affects the weldability of steel. Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: [Sotnik] Ukrainskiy institut metallov (Ukrainian Institute of Metals);
[Kovalenko] Donetskiy institut chernoy metallurgii (Donetsk Institute of Ferrous Metallurgy) 44,53

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, IE

NO REF Sov: 004

OTHER: 000

Copy 2/2

L 35338-66 EWT(m)/EWT(w)/T/EWP(t)/ETI IJP(c) JD/WW/JG
ACC NR: AP6011825 (N) SOURCE CODE: UR/0383/66/000/002/0032/0035

AUTHOR: Kovalenko, V. S.

ORG: none

TITLE: Relationship of the anisotropic properties of zirconium steel
to heat treatment

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 2,
1966, 32-35

TOPIC TAGS: zirconium steel, anisotropy, low carbon steel, temperature dependence, heat treatment, zirconium addition

ABSTRACT: The paper deals with the relationship of the anisotropic properties of zirconium steels to heat treatment. Up to 0.3% zirconium in low-carbon steel improves the lengthwise notch toughness of hot-rolled steel, which is attributed to the refining effect of zirconium on the near-boundary dimensions of the grains. Optimum additions of zirconium neutralize the effect of impurities, which increase the critical brittleness temperature; zirconium additions promote a decrease in notch toughness with a decrease in test temperature. Zirconium minimizes the nonhomogeneity of properties both in longitudinal and

Card 1/2

UDC: 669.15--194:621.785.004.12

L 35338-66

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000825520016-2"

lateral directions in quench hardened steel, explained by the author as a result of a change in the nature of dendritic crystallization and reduction of the macrostructure. Orig. art. has: 2 figures and 1 table.

[LD]

SUB CODE: 11/ SUBM DATE: none

Card 2/2 bkh

KOVALENKO, V.S. (Kiev)

Blood picture in odontogenic osteomyelitis of the jaws. Probl.
stom. 3:163-168 '56
(MLRA 10:5)
(JAWS--DISEASES) (OSTEOMYELITIS) (BLOOD--EXAMINATION)

KOVALENKO, V.S. (Kiyov)

Penicillin therapy in odontogenic osteomyelitis of the jaws. Probl.
stom. 3:173-177 '56
(MLRA 10:5)
(PENICILLIN) (OSTEOMYELITIS) (JAWS--DISEASES)

KOVALENKO, V.S.

Side effects of penicillin. Stomatologija 35 no.5:57 S-0 '56
(MLRA 10:4)

1. Iz kafedry khirurgicheskoy stomatologii (zav.-dotsent N.V.
Fetisov) na baze Kiyevskogo instituta ortopedii i travmatologii
(dir.-dotsent K.M. Klimov)
(PENICILLIN)

KOVALENKO, V.S., kandidat meditsinskiy nauk

Diagnosis of salivary calculus of the submaxillary gland. Vrach.
delo no.4:391-393 Ap '57. (MLRA 10:7)

1. Kafedra khirurgicheskoy stomatologii (zav. - prof. N.V. Fetisov)
Kiyevskogo meditsinskogo instituta.
(SALIVARY GLANDS--DISEASES)

KOVALENKO, V.S., band.med.nauk (Klyev)

Hemotherapy in the over-all treatment of paradentosis. Probl.stom,
4:257-261 '58. (MIRA 13:6)
(GUMS--DISEASES) (BLOOD--TRANSFUSION)

KOVALENKO, V.S., kand.med.nauk

Phleboliths of the maxillofacial region. Vrach.delo no.10:1089-1091
O '59. (MIRA 13:2)

1. Kafedra khirurgicheskoy stomatologii (zaveduyushchiy - prof. N.V.
Fetisov) Kijevskogo meditsinskogo instituta.
(VEINS--DISEASES) (FACE)

KOVALENKO, V.S., kand.med.nauk

Clinical and radiographic picture of salivary calculus of the sub-maxillary salivary gland. Stomatologija 38 no.6:42-46 N-D '59.

(MIRA 13:4)

1. Iz kafedry khirurgicheskoy stomatologii (zav. - prof. N.V. Fetisov) Kiyevskogo meditsinskogo instituta (direktor - dotsent I.P. Alekseyenko).

(CALCULI, SALIVARY)

S/032/62/028/003/012/017
B104/B102

AUTHOR: Kovalenko, V. S.

TITLE: Microphotographic study of the structure of impact fractures

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 3, 1962, 344-347

TEXT: For estimating the "resolving power" of microphotographs the differences in structure of impact fractures of MCT.3 (MSt.3) steel were studied. The tests were undertaken below and above the temperature where cold-brittleness occurs. The specimens had been normalized and were prepared from three different charges: 0.16% (0.21%, 0.17%) C; 0.55% (0.48%, 0.50%) Mn; 0.20% (0.17%, 0.05%) Si; 0.029% (0.03%, 0.034%) S; 0.024% (0.016%, 0.010%) P. The specimens had a slightly irregular ferrite perlite structure with average grain sizes of 5 balls. After a visual examination and description of the structure of the fracture, photos were taken of the facets with 500-fold magnification. The fractures of the specimens studied at +20°C had fine facets with complex and irregular contour lines that sometimes joined into druses. The Card 1/2 ✓

Microphotographic study of the ...

S/032/62/028/003/012/017
B104/B102

surface of the facets are curved by the deformation on destruction. The structure is characteristic of mild steels. New structural features were found in the specimens studied at -20°C; The entire fracture is crystalline, the surfaces of the facets are regular, and the contour lines distinct. The facets have a "packet structure". The structure of the specimens studied at -100°C display very bright and regular facets that can readily be seen in the microscope. The boundaries of blocks, straight lines, and cracks are easily observed in the microscope. The relationship with the crystallographic orientation of grains is evident. Although the impact strengths are approximately equal, the structures of fractures in the specimens studied at different temperatures are different. The structure of the fracture is more sensitive to the loss of ductility of the material than is the impact strength. There are 5 figures, 1 table, and 1 Soviet reference.

ASSOCIATION. Donetskiy filial Ukrainskogo nauchno-issledovatel'skogo instituta metallov (Donets Branch of the Ukrainian Scientific Research Institute of Metals)

Card 2/2